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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,539	03/30/2001	Priya Govindarajan	042390.P10459	7662

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EXAMINER

SORRELL, ERON J

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 11/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/822,539	<b>Applicant(s)</b> GOVINDARAJAN ET AL.	
	<b>Examiner</b> Eron J. Sorrell	<b>Art Unit</b> 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

DETAILED ACTION

*Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6-8, 10-12, 14-18, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharon et al. (U.S. Patent No. 6,205,122 hereinafter "Sharon") in view of Nelson et al. (U.S. Patent No. 5,835,720 hereinafter "Nelson").

3. Referring to claim 1, Sharon teaches a method, comprising:  
    registering a first network device and a second network device (items 14, figure 1) to a policy server (item 12, figure 1) (see lines 18-38 of column 6 and lines 53-63 of column 7);  
    receiving network discovery policies from the policy server at the first and second network devices (see lines 4-17 of column 11, note the assignment of "friend" agents determines which agents pairs are allowed to communicate in order to exchange topology information);

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identifying the second network device at the first network device in accordance with the received policies (see lines 18-24 of column 11);

sending a message from the first network device to the second network device in accordance with the received policies (see lines 30-45 of column 11); and

compiling the established identities to determine the topology of the network (see lines 18-38 of column 6).

Sharon fails to teach the message establishing the identity of any network device between the first network device and the second network device.

Nelson teaches, in an analogous system, sending discovery messages in a network wherein the messages establish the identity of any network device between the first network device and the second network device (see lines 48-59 of column 5).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system and method of Sharon with the above teachings of Nelson in order to reduce total amount network traffic to discover the topology as suggested by Nelson (see lines 46-50 of column 1).

4. Referring to method claims 2 and 17, Sharon teaches identifying the second network device comprises receiving an

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address of the second network device from a third network device (see lines 4-17 of column 11, note the "friend" assignments come from the server running the CME process).

5. Referring to method claims 3 and 18, Nelson teaches sending a packet from a network device, having an interface to an address of the second network device and selecting an interface that corresponds to any reply received from the second network device (see Abstract; col. 3, lines 31-39, 60-61; col. 6, lines 2-5).

Although the combination of prior art does not explicitly state a "network device having the plurality of network interfaces," it does suggest a variety of network devices (see Nelson, col. 2, lines 66-67). Accordingly, it would have been obvious to one of ordinary skill in the art that the devices suggested by the combination of prior art would have included a plurality of interfaces (e.g. "hubs").

6. Referring to claim 4, Sharon teaches sending a PING packet from the devices (see lines 14-24 of column 10).

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7. Referring to claim 6, Nelson teaches executing a route tracing utility to determine the route of a packet (see col. 9, line 58).

8. Referring to claim 7, Nelson teaches a method including the steps of identifying a network device at a given network device (see Abstract); as well as sending a message from a network device to another network device, the message establishing the identity of any network device between the devices (see col. 1, lines 58-67); and compiling the established identities to determine the topology of the network (see col. 2, lines 24-32).

9. As per claim 8, Nelson teaches sending a packet from a network device to another network device (see Abstract; col. 3, lines 31-39, 60-61; col. 6, lines 2-5). Although the prior art combination does not literally cite a "third network device" it does suggest a variety of network devices (see Nelson, col. 2, lines 66-67) as part of the cited method.

Accordingly, it would have been obvious to one of ordinary skill in the art that the devices suggested by Nelson et al. would have included a plurality of ports (e.g. "hubs"). In addition, the reference compiles the identified addresses (see col. 3, lines 39-44).

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10. Referring to claims 10-12 and 14-15, these correspond to the machine-readable medium having stored thereon data representing sequences of instructions corresponding to the method previously rejected in the present Office action. These claims are rejected under the same rationale presented in claim 1-3,5, and 6, respectively.

11. Referring to claim 16, Sharon teaches a method, comprising:

registering a first network device and a second network device (items 14, figure 1) to a policy server (item 12, figure 1) (see lines 18-38 of column 6 and lines 53-63 of column 7);

receiving network discovery policies from the policy server at the first and second network devices (see lines 4-17 of column 11, note the assignment of "friend" agents determines which agents pairs are allowed to communicate in order to exchange topology information);

identifying the second network device at the first network device in accordance with the received policies (see lines 18-24 of column 11);

sending a message from the first network device to the second network device in accordance with the received policies (see lines 30-45 of column 11); and

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compiling the established identities to determine the topology of the network (see lines 18-38 of column 6).

Sharon fails to teach sending a route tracing message from the first network device to the second network device, to determine addresses of any network device between the first network device and the second network device in accordance with the received policies.

Nelson teaches, in an analogous system, sending a route tracing message from the first network device to the second network device, to determine addresses of any network device between the first network device and the second network device in accordance with the received policies (see lines 48-59 of column 5).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system and method of Sharon with the above teachings of Nelson in order to reduce total amount network traffic to discover the topology as suggested by Nelson (see lines 46-50 of column 1).

12. Referring to claims 21 and 22, Sharon teaches sending the established identities to the policy server in accordance with the received policy (see lines 7-13 of column 8), and wherein compiling comprises compiling the established identities at the



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policy server to determine the topology of the network (see lines 7-13 of column 8).

13. Claims 5, 13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharon in view of Nelson as applied to claims 1, 10 and 16 above, and further in view of Aggarwal et al (U.S. Patent No. 5,675,741).

14. Referring to method claims 5 and 19, and machine-readable medium claim 13, the combination Sharon and Nelson fails to teach the step of sending the message comprises sending a plurality of messages to the second network device, each message having an incrementally greater time to live until a message reaches the second network device. Regarding this limitation, Aggarwal et al. teaches a method in a computer network communication system, where a packet has an incrementing TTL (time-to-live) value (see col. 2, lines 42-47).

At the time of the invention, one of ordinary skill in the art would have been motivated to modify the cited combination of disclosures in order to obtain a communication method where a route is successfully traced from any source to any destination regardless of whether one router is known (see Aggarwal, see col. 2, lines 42-47).

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15. Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharon in view Nelson as applied to claims 1,10, and 16 above, and further in view of Fishler (U.S. Patent No. 6,507,646).

16. Referring to claims 9 and 20, the combination of Sharon and Nelson teaches a method where a network device sends a message identifying an address (see lines 18-24 of column 11). However, the combination of references does not teach sending a packet to a port that does not exist in order to provoke a device to send an error message.

Regarding this limitation, Fishler teaches error reporting protocol as part of a communication method (see col. 7, lines 39-55). Fishler teaches implementing this protocol as part of ICMP (Internet Control Message Protocol). Accordingly, one of ordinary skill in the art would have been motivated to modify the combination of references in order to implement an error-reporting message in a method for remotely configuring a network device.

*Response to Arguments*

17. Applicant's arguments filed 9/6/06 have been fully considered but they are not persuasive. The applicant argues:

1) Sharon fails to teach or suggest the use of network discovery policies (see paragraph bridging pages 8 and 9 of applicant's remarks).

18. As per argument 1, the Examiner disagrees. Sharon teaches the use of network discovery policies. Network policies, as set forth in applicant's specification (see paragraph 14 on pages 8 and 9), instruct network devices on how to gather topology data and may include, *inter alia*, the identity and address of other devices on the network. Sharon teaches that each agent on the network receives a "friend" assignment, wherein the friend is determined to be another device on the network in which the current device is instructed communicate with for determining the topology of the network (see lines 4-17 of column 11). In other words, Sharon teaches instructing an agent on the network as to what other agents on the network then agent should be communicating with to determine the network topology. The assignment of friends is equivalent to applicant's policy of identifying other network devices for topology gathering purposes.

*Conclusion*

19. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J. Sorrell whose telephone number is 571 272-4160. The examiner can normally be reached on Monday-Friday 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on 571-272-4147. The fax phone number for the

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organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EJS

November 14, 2006



KIM HUYNH  
SUPERVISORY PATENT EXAMINER

11/15/06